

AFM 1-7

A I R F O R C E M A N U A L

AIR DOCTRINE

**THEATER AIR FORCES
IN
COUNTER AIR, INTERDICTION
AND
CLOSE AIR SUPPORT OPERATIONS**

1 MARCH 1954

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AIR FORCE MANUAL }
No. 1-7

DEPARTMENT OF THE AIR FORCE
WASHINGTON, 1 March 1954

Foreword

1. *Purpose and Scope.* This Manual is prepared as a guide for planning and conducting air warfare in a theater of operations. It will serve also as guidance and information for other forces supporting or working in conjunction with theater air forces.

2. *Contents.* The Manual is based on AFM 1-2, United States Air Force Basic Doctrine, and AFM 1-3, Theater Air Operations. It provides the doctrine for the employment of counter air, interdiction, and close air support operations in theater air operations. These operations are regarded as basic combat air tasks for theater air forces. Other theater air operations are discussed in separate Air Force Manuals.

BY ORDER OF THE SECRETARY OF THE AIR FORCE:

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Chapter 1

THEATER AIR FORCES AND ORGANIZATION

Section A. THE CONCEPT

1. The Nature of Theater Air Operations

The conduct of war by all forces within a theater of operations is a series of air, ground, and naval actions directed toward the accomplishment of the theater mission. The air actions of the theater air forces are conducted to execute sustained offensive and defensive air operations aimed at the destruction or neutralization of an enemy military force. These air operations may be carried out independently by theater air forces, or they may be a coordinated effort with the land and/or naval forces when the attainment of a common objective requires the coordinated action of these forces.

2. Theater Air Tasks

a. Theater air forces are organized to perform all air tasks required in the theater. (See AFM 1-3.) These tasks include counter air, interdiction, close air support, reconnaissance, airlift, and various special operations.

b. Three of these tasks—counter air, interdiction, and close air support—are considered basic combat functions performed by theater air forces. These three tasks are interrelated and interdependent.

Section B. OBJECTIVES OF COUNTER AIR, INTERDICTION, AND CLOSE AIR SUPPORT OPERATIONS

5. Counter Air Operations

The objective of counter air operations is the destruction or neutralization of the enemy's

3. Priority

a. The priority for the accomplishment of these tasks is determined at any specific time by the requirements for the neutralization of the enemy threat posing the greatest obstacles to the accomplishment of the theater mission.

b. It is not implied that the conclusion of any one of these tasks is required prior to the performance of the others. It is implicit in theater air operations that all of the tasks are of a continuing nature, in order to establish and maintain a condition suitable for the exploitation of conditions imposed upon enemy military forces.

4. Scale of Effort

Depending upon the conditions existing within the theater of operations, the emphasis and degree of air effort to be applied in the accomplishment of the theater air tasks will vary. These determinations will be made by the theater air commander. The decisions will be based upon the current commitments and missions being conducted by the theater air forces to achieve the overall theater objectives. Necessarily, they will be influenced by the estimated long-term gains to all the forces as a whole.

air power. Successful conduct of the theater air and surface operations is dependent upon the degree to which counter air operations have

progressed. Without a satisfactory degree of control of the air, surface action and other air action in the area of operations will be restricted unduly by enemy action.

6. Interdiction Operations

The objective of interdiction operations is to destroy or neutralize the enemy military potential before it can be brought to bear effectively against our own forces, and to restrict the mobility of hostile forces by disrupting enemy lines of communications.

7. Close Air Support Operations

The objective of close air support operations is to assist surface forces in the immediate battle area by the aerial delivery of firepower against hostile surface targets. Close air support operations generally are conducted during phases of a theater campaign when friendly ground forces are exploiting the surface situation by offensive action. Surface exploitation usually is conducted when the enemy threat from the air has been neutralized by counter air operations and the enemy situation on the surface has been weakened by air interdiction.

Section C. PRINCIPLES OF ORGANIZATION

9. Four Basic Considerations

The organization of theater air forces is based on the principles of centralized control, coordination of effort, mobility, and flexibility. These principles apply equally in counter air, interdiction, and close air support operations.

a. *Centralized Control.* Centralized control is achieved through unity of command vested in the theater air commander. It provides the essential means for rapid shifting air effort and concentration of force in accordance with changing requirements dictated by prevailing circumstances. It insures continuity of action and provides a single authority responsible for the results of an operation. Centralized control is mandatory in exploiting the inherent mobility and flexibility characteristics of air power. Air forces are an entity and must be employed as such.

b. *Coordination of Effort.* The scheme of employment for theater air forces is a coordi-

Additionally, close air support operations may be necessary in order to prevent excessive losses during periods when friendly surface forces are engaged in defensive action.

8. Other Operations

The performance of the basic combat function is furthered by other tasks (reconnaissance and airlift) and services (communications, intelligence, and administration) accomplished and provided by elements of the theater air forces.

a. *Reconnaissance.* Theater reconnaissance forces procure information about enemy forces, weather and terrain, and facilities and installations. The information which they gather is for the use of all forces engaged in theater operations.

b. *Airlift.* Theater airlift forces provide mobility in theater operations. They are constituted as an organic force of the theater air commander and are employed in behalf of the theater objective rather than for any specific component force of the theater. They are used for the transportation of personnel and cargo, aeromedical evacuation, and in airborne operations.

nated action from the inception of theater planning to the final defeat of the enemy forces. Conclusive results are obtained by concentration of effort and singleness of purpose. Coordination with the ground forces, required primarily in close support operations, is facilitated by locating the tactical air command—Army group, tactical air force—Army headquarters adjacent to each other.

c. *Mobility.* Theater air forces are organized so that they are able to move with minimum delay and without losing either control or operational efficiency.

d. *Flexibility.* Flexibility is an inherent quality of air forces. It is gained from the medium in which these forces operate, the nature of their weapons and munitions, and the effects that they produce. The primary significance of this quality is the diversity of elements of the structure of the opposing forces that can be brought under extraordinarily heavy

attack and the speed with which the attack against these various elements can be shifted. This characteristic of theater air forces is particularly pertinent in the following respects:

(1) It permits concentration of attacks on targets wherever located and compels the enemy to disperse his facilities and forces and spread his defensive effort.

Section D. COMMAND AND CONTROL

10. Theater Air Commander

a. The control of all air forces assigned to, and employed in, the theater of operations is vested in the theater air commander.

b. This centralized control permits the timely application of munitions in sufficient quantities to those targets which offer the greatest return in relation to the overall air tasks. Therefore, air elements are not placed under the command of other component commanders. Great care must be taken constantly to insure that effort is not expended which does not contribute to the attainment of the theater objective.

11. Theater Air Forces

a. As a means of effecting control, the theater air commander establishes subordinate air organizations and delegates authority accordingly. Subordinate organizations normally include: One or more tactical air commands, an air transport force, an air defense command if the geography and requirements so dictate, plus a logistical force.

b. The composition of forces assigned and allocated to a theater is determined by the mission and conditions of the theater. No fixed composition is feasible. Changes may be made as necessary to meet threats against the theater.

c. Theater air forces may consist of air units from any service or participating nation. When such air units are employed, and compatible with the tactical situation, their service or national integrity is maintained and they are operated as units.

12. Subordinate Commands

The following organizational arrangements normally are utilized for the command and

(2) It permits wide dispersion of bases and facilities without greatly diminishing the ability of forces to concentrate quickly in the air.

(3) It permits the rapid shifting of effort from one element of the target system to another.

control of theater air forces in the performance of counter air, interdiction, and close air support tasks.

a. *Tactical Air Command.* A tactical air command is organized, equipped, and trained to plan and conduct air operations independently or in conjunction with an army group. It consists normally of two or more tactical air forces, a tactical bomber force, and an air reconnaissance organization. The commander of the tactical air command assigns broad overall missions and defines responsibilities to subordinate forces, coordinates their efforts, and allots to them the means necessary for the accomplishment of their respective missions. He may transfer command or operational control of air units among subordinate tactical air forces to meet a changing tactical situation. The reconnaissance element serves the needs of the tactical air command headquarters, the army group headquarters, and the tactical bomber force, and is directly controlled from the tactical air command headquarters.

b. *Tactical Air Force.* A tactical air force is organized to conduct tactical air operations independently or in conjunction with a field army. Normally, it is the lowest level organized for the planning of air operations. The number and types of subordinate units assigned are not fixed but are based on requirements and availability. Normally, the following types of units will be found within a tactical air force: Fighter wings (day fighter, fighter bomber, and fighter interceptor), tactical control group and reconnaissance wings capable of conducting day or night visual, photographic, and electronic reconnaissance operations. In addition, all-weather units will be assigned to conduct night operations. The tactical air force commander controls the operations of these subordinate units

through the control and reporting system organic to each tactical air force.

c. *Tactical Bomber Force.* A tactical bomber force is immediately subordinate to the tactical air command and under the control of the tactical air command for operations. The tactical air command normally designates targets for the bomber force. The employment of this force encompasses such a large area that greater efficiency and coordination are achieved when its operations are controlled by the tactical air command.

Section E. THE TACTICAL AIR CONTROL SYSTEM

14. Facilities

a. The tactical air control system is the facility that provides the air commander with the organization and equipment required to control all air operations in his designated area. It aids the commander in maintaining centralized control over his forces. The tactical air control system is organized, manned, and equipped by the Air Force to provide this capability. This system provides the means of monitoring, filtering, and controlling the air movement of all aircraft in the tactical air force area of responsibility.

b. Components of the system are a part of the tactical control group organized under the jurisdiction of the tactical air force to perform the necessary functions of the system. The operational echelons of the system include an air control center (ACC), control and reporting centers (CRC), control and reporting posts (CRP) and target director posts (TDP), and such other control facilities as required.

15. Control

This system provides the degree of detailed control essential to the application of air effort at the time and place required. Its *flexibility is adaptable readily to the requirements of all theater air tasks.* It contributes to these tasks by—

- a. Providing the means for the rapid shifting of operational control of forces.
- b. Facilitating the shifting of air effort to new targets and missions as required.
- c. Facilitating all-weather air operations.

13. Other Forces

When air forces not assigned and allocated to the theater are directed to supplement the operations of the theater air forces, they are placed under the operational control of the theater air commander. In such circumstances, the theater air commander in whose area the operations are conducted is responsible for the selection of targets, assignment of tasks, designation of forces, and the plan of employment.

- d. Aiding in accurate navigation to targets.
- e. Providing the means for coordinating and directing antiaircraft artillery.

16. Air Control Centers (ACC)

a. The air control center is the focal point for the aircraft control and warning activities of the tactical air forces. It is an air information, communication, and control center and has no command functions other than those specifically designated. Through this center the tactical air force commander controls all air activity within his area of responsibility. The air control center is located adjacent to the joint operations center. This center provides information from which aircraft and antiaircraft fire are integrated and controlled. The operational load at the air control center is reduced by maximum delegation of air control to subordinate control facilities. Control of aircraft requiring general direction only, normally is retained by the air control center. Control of aircraft requiring more precise direction is delegated to control and reporting centers, target director posts, or forward air controllers. Even when delegated to outlying facilities, the air control center can resume control at any time. Functions of the air control center include—

- (1) Obtaining and displaying current filtered information on all air operations, both friendly¹ and enemy, within the tactical air force area of responsibility.

¹ Friendly aircraft.

(2) Furnishing pertinent information on such activity to the joint operations center.

(3) Directing the operations of subordinate control and reporting agencies.

(4) Coordinating the active air defense facilities of the tactical air force with other air defense activities in the tactical air force area of responsibility and adjacent areas. This includes the identification and filtering of army light aviation activity in the area.

(5) Scrambling fighters for air defense as authorized.

(6) Assigning control of aircraft on air defense missions to the appropriate control and reporting center or post.

(7) Maintaining contact with aircraft conducting tactical air operations, either directly or through one of the subordinate control facilities.

(8) Providing navigational aid to friendly² aircraft.

(9) Warning all interested agencies of impending air attack, to include army light aviation.

(10) Coordinating search and rescue operations.

(11) Coordinating with adjacent air control centers and sector operation centers.

(12) Providing control and assistance, as required, to external friendly² aircraft, operating within or through the area of responsibility.

b. The number of personnel assigned to the air control center is not a fixed requirement. It is dependent upon the situation within the tactical air force area and the number of subordinate echelons which must be controlled. The normal complement will consist of those personnel necessary to accomplish both the offensive and defensive phases of operations on a 24-hour basis.

17. Control and Reporting Center (CRC)

The control and reporting center is a subordinate echelon of the tactical air control system. Control and reporting centers are organized and employed to provide the necessary radar control for both offensive and defensive missions conducted within the tactical air force

² Friendly aircraft—includes all army light aviation.

area. They are deployed in the numbers necessary to insure adequate coverage of the entire area of responsibility and sited in those locations which afford the maximum utilization of the organic radar and communications equipment. Under certain circumstances, a control and reporting center may function as both an air control center and a control and reporting center for a limited period of time; however, this procedure is limited and is resorted to in localized situations only, for example, in the early stages of an airborne or amphibious operation or when the air control center is out of commission.

18. Control and Reporting Post (CRP)

This element of the control and reporting system is used primarily to extend the radar coverage of the control and reporting center.

19. Target Director Post (TDP)

The target director post is subordinate to the control and reporting center. It functions as a special control element of the tactical air control system. This unit is characterized by its organic type of radar equipment which is a narrow beam radar without search facilities. It performs no air defense warning service but is used as a blind bombing system and to position aircraft over predetermined geographical locations. The changing requirements of the tactical situation require this unit to possess a high degree of mobility in order to shift locations rapidly with a minimum loss of operational efficiency. Maximum range penetration into enemy territory is obtained by locating the unit in proximity to the main line of resistance of the surface forces. The surface forces assume the responsibility for providing security and certain logistical support.

20. Forward Air Controller (FAC)

a. The forward air controller is an experienced Air Force fighter bomber pilot, of flight leader quality, who has been trained to control close air support strikes by simple visual-voice radio communications.

b. The tactical air force commander will furnish forward air controllers in sufficient numbers to insure adequate and timely control of the close air support he is rendering.

Section F. PLANNING

21. Theater Planning

a. The theater commander is responsible for delineating strategy and the scheme for employing component forces in accomplishing the theater mission.

b. Planning at the theater level is concerned primarily with broad aspects of strategy and with the numbers and types of forces required under the adopted plan of strategy. This planning provides a basis upon which theater component commanders prepare their operational plans. It is for the guidance and direction of component forces.

c. By means of the theater plan, the individual courses of action of the various component forces are integrated to accomplish a single theater objective. Using the theater plan for basic reference, each component force commander develops the plans for the employment of his forces. These plans then are coordinated to insure that they are compatible with the assigned objectives.

22. Theater Air Planning

a. The theater air commander is responsible for the preparation of plans for the employment of theater air forces.

b. Planning at this level defines the theater air tasks and furnishes the basis for the employment of air forces by subordinate air commanders.

23. Tactical Air Command—Tactical Air Force Planning

Air commanders at tactical air command and tactical air force levels conduct the planning for the accomplishment of the tasks that are set out by the theater air commander. Through planning at these levels, the theater air commander's generalized plans are developed in greater detail. The tactical air force is the lowest level of joint planning for air operations.

24. Primary Considerations

Because control of the air is mandatory to the conduct of sustained offensive theater operations, primary consideration is given to the relative capabilities of friendly and opposing air forces. The predominant factor in planning theater air operations is the transcendent importance of gaining and maintaining control of the air. Planning for any one of the theater air tasks must take into account all theater air tasks, for the same forces which perform one may be used as well in others.

25. Complete Information

Planning is a continuous process. Plans must be flexible so that prompt advantage can be taken of every opportunity. The basis of all planning is complete, accurate, and timely intelligence on the enemy's forces.

Chapter 2

COUNTER AIR OPERATIONS

Section A. THE CONCEPT

1. Employment

a. Counter air operations are conducted to destroy the enemy's air power.

b. Counter air operations are conducted against the whole of the enemy's air structure and organization, including aircraft, personnel, and the entire logistical system. The operations may extend to all parts of the theater. Air forces may penetrate deep into hostile territory to neutralize enemy air installations, personnel, facilities, and equipment, or they may neutralize enemy air vehicles in the air in either offensive or defensive operations. In the final analysis, however, conclusive results are achieved through offensive action. Although defensive measures may be employed in conjunction with offensive operations, defense alone is employed only under conditions when offensive capabilities are not available to the commander concerned.

c. Conclusive results are obtained in counter air operations by the concentration of effort offensively, and by singleness of purpose. One of the theater commander's primary concerns is to obtain a preponderance of air strength at the decisive time and place. The flexibility and mobility of air forces are employed in such a manner that favorable opportunities which occur in the air battle may be exploited immediately for the purpose of advancing and securing control of the air.

2. Priority

a. The conduct of counter air operations is the primary consideration of theater air forces.

b. The general criterion for the employment of the air resources in a theater will vary in

accordance with successive evaluations of the enemy threat to the theater. Priorities may shift frequently with the changing conditions of battle, but the method of utilizing air forces never deviates from the objective of concentration of effort. Economy of effort and singleness of purpose are achieved when the operations undertaken by air forces produce interrelated effects throughout the theater. The combat tasks of counter air, interdiction, and close air support continually shift in relative urgency. Generally, there are insufficient forces to conduct extensive operations in all tasks at one time. Therefore, the allocation of effort always is in terms of the needs of the theater. Centralized control of all air forces in a theater permits the application of fire power in timely and sufficient quantities to those targets which offer the greatest return in relation to the mission of the theater.

c. Once begun, the air battle is continued until a desired degree of neutralization or destruction is attained.

d. The proper employment of air forces requires that provision be made for obtaining sufficient information to permit the timely recognition of the point at which the operation either has achieved its goal or has failed to do so to the degree that it must be abandoned or revised. Careful selection of objectives will result in major economies in the utilization of forces. If the effort falls short of its goal even by a relatively small margin, time and forces may be wasted. Objectives must be realigned quickly in consonance with the success or failure of an operation. Sufficient forces must be provided to sustain the effort.

Section B. OBJECTIVES

3. Control of the Air

a. Counter air operations are conducted with the objective of gaining and maintaining control of the air in the degree that is essential for the successful conduct of the theater mission.

b. Adequate control of the air is a prerequisite to the initiation of sustained offensive operations by surface forces. In the absence of this degree of control, such extensive security measures by the forces concerned are necessary that their sustained offensive capability is nullified.

c. Control of the air is achieved when air forces can effect planned degrees of air operations while denying this opportunity to the enemy. When this advantage is held, air forces are able, if required, to exploit their power in other air operations to facilitate the accomplishment of the theater mission still further. Similarly, opportunities are created for surface forces to exploit control of the air according to their own capabilities.

4. Scope of the Task

With the advent of atomic and thermonuclear weapons, the achievement of a condition of control which would permit surface operations in comparative immunity from interference by enemy air has become vastly more difficult. The successful penetration of a single enemy aircraft now could result in devastating destruction. Under these conditions the degrees of control once considered acceptable is no longer adequate. The greatest initial contribution that theater air forces can make still will be through counter air operations, since only by such operations can an acceptable degree of control of the air be achieved. Without this control, surface forces would be unable to conduct offensive operations, and theater air forces similarly could not perform their other basic air combat tasks adequately or effectively.

5. Control—A Changing Condition

a. Because of the constantly changing conditions of battle, control of the air will occur in varying degrees. It may range from absolute

control by the enemy to absolute control by friendly air forces. Between the two extremes there will be conditions requiring a continuous, though varying, application of force.

b. It is seldom practicable to completely eliminate an enemy air threat to a theater of operations because the enemy forces may be deployed to widely separated bases, dispersed in the air and on the ground, or safeguarded otherwise. Furthermore, if the enemy's logistical and production system is operating effectively it may be possible for him to replace losses in aircraft, bases, facilities, and personnel in a relatively brief period of time. Additionally, actions which enemy air forces take in theaters elsewhere may affect the conditions of control of the air in any other theater. Likewise friendly air actions in other theaters may contribute to the degree of control of the air held in some specific theater. A resourceful enemy may be able to shift reserves and equipment, call upon emergency means of production, and improvise otherwise, and, through such efforts, to preserve segments of his forces and prolong resistance even though successful attacks have been waged against many of his bases and facilities. The effects of such efforts may be to alter frequently the degree of control of the air which is held by friendly air forces. In view of these circumstances, continuous appraisal is necessary to determine the extent of effort that is allocated to counter air operations at any time.

c. Control of the air also is a relative condition. The varying degrees of control do not afford identical advantages at all times to all types of forces, but have different meanings in terms of security and advantages for air forces, ground forces, and sea forces. The commanders concerned in each instance must analyze the opportunities which any degree of control of the air affords to them within the capabilities of their own forces.

d. The opportunities that any degree of control affords for different types of forces will vary widely. Conditions may not again exist wherein surface forces can mass and maneuver with the necessary immunity from devastating air attack as was provided in previous combat. This serious limitation on surface operations

stems from the capabilities which atomic-thermonuclear weapons give to air forces. A degree of control which is sufficient for conclusive operations by air forces may be insufficient for surface forces to undertake operations of similar significance and proportions without

risking unacceptable losses. Thus the advent of mass destruction munitions has vastly increased the capabilities of air forces while concurrently decreasing the capabilities of surface forces. It follows, therefore, that air forces are the primary, predominant, and decisive forces.

Section C. EFFECTS

6. Theater Air Forces

All facilities, combat elements, and sustaining activities and organizations, placed under the theater air commander in accordance with the principles of centralized control, are employed as necessary to achieve the desired effects in counter air operations. The theater air commander is responsible for determining the assignment of effort to the counter air battle.

7. External Air Actions

All counter air operations are interrelated, overlapping, and complementary. There can be no fine line of demarcation between tactical and strategic types of operations in the air battle. All have mutual effects. While control of the air may be sought through air action in a specific theater, it may be sought simultaneously by similar action in other theaters, and by strategic air operations. The battle for control of the air frequently requires the employment of heavy and medium bombers capable of striking any source of the enemy's air production and support facilities.

8. Deployment of Forces in Counter Air Operations

a. *Offense.* Control of the air can be established and maintained only by offensive air operations. Therefore, when necessary, a calculated risk is taken in respect to defensive measures in order to make available a greater offensive capability. This offensive capability is directed to the destruction of enemy airfields, aircraft, and the sustaining structure of the air forces.

b. *Offensive-Defensive Considerations.* The characteristics and capabilities of air weapons and munitions of mass destruction have increased the threat posed by hostile air forces. The defensive ability of one air force as com-

pared to the offensive capability of another air force will not permit consideration of any course other than a determined offensive as a means of survival. Because of the advantages accruing to air forces employed offensively, the paramount effects in counter air operations are sought through offensive air operations against selected elements of the enemy's air power. These offensive actions are priority undertakings essential to the achievement of success in the air battle. They are decisive in nature. They do not, however, negate defensive considerations.

c. *Defense.* Defense against hostile air operations, in this instance, is distinguished from that measure of security accruing to an attacker by virtue of his offensive air operations. The responsibility for air defense of the theater rests with the theater air commander. Normally, this function is discharged by the tactical air commander in the combat zone and by the air defense commander in the other theater areas. Close coordination between the two is mandatory. Antiaircraft artillery organic to the surface forces augments the air defense capability.

9. Targets

a. Targets for air forces engaged in counter air operations generally fall in three categories:

(1) Aircraft—airborne and on the ground.

(2) Air bases.

(3) Personnel and elements of the supporting structure contributing directly to the enemy's capabilities in the air.

b. The battle for control of the air normally will include operations against targets in all three categories. Destruction or neutralization of deployed enemy air forces as well as destruction or neutralization of the sustaining structure and organization which enables the enemy

to conduct air warfare, must be accomplished. Unless the enemy's sustaining capabilities are neutralized or destroyed, the air battle is likely to become a war of attrition. This is an unten-

Section D. PLANNING FACTORS

10. Planning Cycle

The basic counter air plan for the theater is prepared at the theater air commander's headquarters. On the basis of this plan, subordinate air commanders develop their portions of the counter air plan to the degree necessary. In this manner the theater counter air plan is developed and specific tasks are delineated and assigned to subordinate units.

11. Phasing of the Objectives

Proper selection and phasing of counter air objectives is essential in planning counter air operations. Objectives are limited at the outset to destruction or neutralization of those elements of the enemy's air strength which pose the greatest threat to the theater security. The proper selection and neutralization of critical portions of the enemy's air capabilities will render his air forces ineffective or unoperational. The requirements are—

- a. Enemy air attacks must be successfully countered.
- b. Friendly air forces must seek out and destroy enemy air vehicles in the air and on the ground. This includes attacks against air bases, personnel, and logistics.
- c. The enemy means for replacing his losses must be neutralized or destroyed.

able position for theater air forces because the theater mission cannot be brought to a successful conclusion until the theater air forces hold the necessary degree of control of the air.

12. Maintenance of the Objectives

- a. This is the responsibility of the individual air commander at each echelon of command. The commander must delineate clearly the current and ultimate objectives.
- b. As the air battle moves from the decisive to the exploitation phase, authority is delegated in ever-increasing measure to subordinate air commanders who employ their forces in accordance with increasingly broad directives.

13. Exploitation

Advantages gained in the counter air battle must be exploited promptly. Accordingly, the detailed planning conducted by the operational units must be flexible and quickly responsive to changing conditions. Control of the air, once established, permits increased concentration of air effort on other of the air tasks.

14. Force Requirements

- a. Force requirements for the counter air battle are determined at the theater command level by the theater air commander.
- b. Counter air force requirements are determined by analyzing the tasks to be accomplished and by comparing friendly and enemy air capabilities as effected by and respecting matters such as: personnel, operations, logistics, geographical factors, topography, climate, and weather.

Chapter 3

INTERDICTION OPERATIONS

Section A. THE CONCEPT

1. Denial

- a. Denying the enemy the ability to provide supplies and reinforcements for the support of his forces, as well as preventing their movement, long has been a prime objective of combatants at war.
- b. Before the advent of air power, the implementation of this strategy was limited to actions taken by surface forces to seize or control areas through which the enemy's lines of communications passed. At times, denial was achieved through sea blockade. Because of the limitations of the weapons employed by both land and naval forces, the actions of these forces were confined to the periphery of the opposing nation.
- c. The development of air forces and the exploitation of their inherent characteristics of range, speed, flexibility, and striking power, made it possible to overcome the limitations imposed on surface forces and to penetrate deep into enemy-held areas. This capability has made it both possible and profitable to strike at elements of the enemy's logistical system which are most lucrative and vulnerable. However, until friendly air forces have gained control in the air in an acceptable degree, this interdiction concept cannot be exploited fully.

2. Logistics and Forces

- a. The logistical structure most needed to provide supplies and reserves to military forces consists of supply depots, storage facilities, repair and modification centers, transportation terminals, lines of communications, and staging areas located both in enemy forward and rear areas. Supplies and troop shipments originating in rear areas must be transported to modification and staging areas, to storage facilities, and thence to combat units in the battle area. A combination of land, sea, and air transport may be used.
- b. In developed countries, material of considerable bulk is moved principally by rail and water, with roads and highways as secondary and supplementary lines. Undeveloped countries rely heavily on road and water transportation. Air transportation provides a means of moving troops and supplies quickly, and to areas remote and inaccessible to surface means. Regardless of the means employed, secure lines of transportation are a paramount necessity for sustaining deployed combat forces. The magnitude and complexity of this structure will vary with the size and nature of the combat forces being supported.
- c. Through interdiction operations conducted against these facilities and resources it is possible to create conditions affecting the whole of the enemy's forces—air, ground, and sea.

Section B. OBJECTIVES

3. Reducing the Threat

a. The objective of interdiction is to deny military sustenance to deployed enemy forces and to limit their freedom of movement.

b. Achievement of this objective decreases the threat offered by enemy forces and prevents a buildup of their combat strength.

c. Reducing the combat capabilities of the opposing forces serves to—

(1) Provide freedom of action to friendly forces to conduct operations.

(2) Gain time for the building of strength of friendly forces.

(3) Permit friendly forces to engage in offensive and defensive action in accordance with the best tactical advantage to be gained.

(4) Further containment and reduction of threatening hostile forces.

d. Preventing a buildup of combat capabilities serves to—

(1) Deny or diminish the enemy's ability to mount an offensive.

(2) Prevents the enemy from counterbalancing an increase in friendly strength.

4. Selection of Objectives

The identification of the enemy's forces by number and type provides a basis for calculating the logistical requirements of these forces under predicted conditions of battle. From this estimate, the tonnages required daily are computed. An analysis then is made of the logistical system through which these resources are made available. The capacity of this sys-

tem is estimated and a calculation is made of the degree of destruction necessary to achieve the desired battle effects. From these estimates and analyses, force requirements are determined.

5. Systematic Attack

The objective of interdiction entails the execution of a carefully conceived, comprehensive plan designed to isolate an area and to stop all support from reaching the area of conflict. To achieve this objective, it is necessary to attack systematically the significant elements of the enemy's logistical system, and to maintain a high degree of destruction until the desired effect has been achieved. This objective involves the performance of destruction or neutralization, delay, and harassment, each of which may be selected as an objective within itself. The judicious selection of specific objectives in interdiction operations requires a careful evaluation of the tasks to be performed and the capability of the forces available.

6. Availability of Forces

The availability of forces for interdiction operations will be determined to a large degree by the requirements for other tasks, including counter air and close air support. The priority for the accomplishment of these tasks is determined at any specific time by the requirements for the neutralization of the enemy threat posing the greatest obstacles to the accomplishment of the theater mission.

the combat capability of enemy forces. Interdiction operations produce more substantial results when conceived and executed in terms of the theater mission and its requirements. Accomplishment of interdiction is related directly to air action taken to destroy the production facilities needed to maintain deployed military forces. Thus, interdiction operations may make contributions to the success of the counter air battle.

8. Effects of Isolation of the Area of Conflict (Air, Ground and Sea)

a. All segments of the enemy's transportation and logistical structure are affected and these structures are rendered incapable of providing combat forces with battle sustenance. Moreover, sustained movement in military effective proportions out of and within the area is prohibited. Through these conditions the maximum degree of denial of supplies, reinforcements, and mobility can be imposed.

b. The achievement of this effect is an ideal of interdiction. When achieved, it will produce the greatest dividends.

c. Isolation of the area of conflict serves to:

(1) Compel the enemy to consume his forward supplies.

(2) Prevent reinforcements from being moved into the area.

(3) Prevent the withdrawal of forces.

(4) Prevent the shifting of forces within the area.

(5) Impose an untenable position on hostile forces, particularly if those forces are compelled to commit and sustain a major portion of their combat potential in action.

d. Isolation of the area of conflict can be maintained only by continuous action because the variety of means available to the enemy may permit the restoration of resources to these combat forces. Complete isolation of the area of conflict seldom is achieved; at least a small quantity of resources almost always will sift through.

9. Effects of Destruction or Neutralization

a. Through the achievement of destruction or neutralization, vital reinforcements and supplies are denied to the enemy even though lines of communication remain partially open. The quantities of supplies and reserves available to the enemy are reduced to the point where essential needs are not met. Destroyed supplies must be replaced and the capability of neutralized forces restored, both of which are time consuming.

b. Effort may be directed at destroying or neutralizing all categories of battle-sustaining resources or only selected items of critical importance.

c. The variety of means that may be available to an enemy to supply his forces and the degree to which these resources may be dispersed make it impracticable to deny all supplies and reinforcements through destruction or neutralization. The effect sought is a reduction of the quantity of resources available to the enemy's combat forces.

d. Destruction or neutralization serves to—

(1) Reduce the level of resources available for battle use.

(2) Delay or deny critically needed resources for combat use.

e. Attrition thus produced may be relatively lasting. The effects of this attrition depend upon the level of prestocked materiel in the theater and the productive capability of the enemy. The effect of delaying the availability of resources in the battle area may be expected to be relatively temporary. The duration will depend upon the adequacy and location of the stocks from which resources are replaced.

10. Effects of Delay

a. Delay is sought when isolation, destruction, or neutralization are not within the capability of the available forces, or when only limited results are desired. The advantage gained from delay must be exploited before the effects produced have dissipated.

b. Delay may be directed toward theater-wide or limited-area effect, depending upon the objectives and the forces available. Localized effects so produced are extremely transitory in nature and generally are not sought when the capability exists to achieve an effect of a more lasting and theater-wide character.

c. Delaying action serves to—

(1) Gain time for the buildup of friendly strength.

(2) Gain time for the more advantageous positioning of combat forces.

(3) Prevent the enemy from sustaining an offensive at the desired rate and magnitude.

(4) Prevent the enemy from meeting his urgent needs.

11. Effects of Harassment

a. Harassment hinders the enemy's logistical activities and movements. It is the least re-

Section C. EFFECTS

7. Scope of Effects

a. Effects are sought on the whole of the enemy's theater forces—air, ground, and sea.

b. The effects produced through interdiction may be temporary or lasting. Temporary effects may be created for specific operations of limited duration and objective. For the greatest contribution to sustain theater action, however, the creation of long-term conditions is essential and will have a greater impact on

munerative of the specific interdiction objectives but can be performed to a degree with any force available. The objective is to cause the enemy general inconvenience.

b. Effects sought through harassment may be local or theater-wide and are intended to be cumulative. Unless persistent attacks are delivered, the effects produced will be transitory and generally imperceptible. Harassment, as a specific interdiction objective, is conceived as being a means of adding to the enemy's burden of sustaining his forces.

c. Harassment serves to—

(1) Force the enemy to take defensive measures which consume time and effort.

(2) Force the enemy to take precautions which will reduce the speed and movement of resources.

(3) Restrict freedom of activity.

12. Target Categories

a. The designation of the appropriate elements of the enemy's logistical system to bring under attack in an interdiction program requires an extensive examination and careful

Section D. PLANNING FACTORS

13. Basic Principle

The basic principle in interdiction planning is that the objectives selected, within the capability of available forces, must be those which will produce the greatest dividends in terms of the theater mission. Planning in this manner promotes effective interdiction operations and furthers the objectives of theater air and surface forces.

14. Interdiction Plan

The basis of interdiction planning at the theater air command level is complete, accurate, and timely intelligence on the enemy's logistical structure. Further, the economic, military, and political aspects must be considered.

a. Additional considerations in interdiction planning, at the theater air command level, are—

(1) The logistical requirement of the opposing forces under current and predicted conditions of battle.

analysis of those systems, facilities, installations, and personnel required to sustain combat forces in operations.

b. The essential segments of a logistical structure are—

(1) *Transportation Lines*—Railroads, roads, sea lanes, inland waterways, air transport, and pipelines.

(2) *Transportation Centers*—The terminals and centers at which the various transportation lines merge and rerouting and reloading take place.

(3) *Supply Depots and Storage Facilities*—These facilities include supply and fuel storage depots in rear areas and more dispersed supply points near the battle zone.

(4) *Repair and Modification Centers*—Equipment is prepared for combat at these facilities.

(5) *Staging Areas*—The troops are equipped and processed for battle at these centers.

(6) *Industrial Installations*—Installations which produce materials for the sustenance of combat forces.

(2) The nature and magnitude of the enemy's logistical system. (This includes the vulnerability of his facilities and installations required to support his forces.)

(3) The size and capability of forces available or whose availability is contemplated.

(4) The impact of the effects that can be produced, including the chain effects that can be expected.

(5) The phasing of interdiction operations and the time required for an effective program.

b. The theater interdiction plan establishes the general scheme of employment. It enumerates available forces by type and number, outlines logistical support, delineates force responsibility, establishes the general system of targets, prescribes the priority of target systems, and describes the anticipated results. This plan also provides the theater commander with the essential information which will enable him to correlate the actions of the other services.

c. At this level, planning is generalized. It is for operations that are to be conducted at a

future date. Day-to-day detailed operational planning is done at tactical air command and tactical air force levels.

15. Interdiction Planning at Tactical Air Command and Tactical Air Force Levels

a. The Commander, Tactical Air Command, is responsible for planning the actions to accomplish interdiction tasks. Through planning at this level, the theater air commander's general plan of interdiction is developed further and specific tasks are delineated and assigned to the tactical air force and tactical bomber force.

b. Planning at tactical air force level pertains to the particular tasks that will be undertaken by assigned units. This planning is based on general planning carried out at tactical air command and higher echelons. At tactical air force level, planning involves the day-to-day conduct of operations for the implementation of the assigned portion of the broad theater air interdiction task. It covers specific and detailed actions of forces to be employed. These plans are formulated for the use of force and unit commanders in the preparation for, and the execution of, their assigned portion of the theater interdiction plan. The plans involve the definition of detailed tasks and the methods of performing these tasks. Consideration is given to such matters as operational procedures, communications facilities, and equipment and personnel needs.

16. Coordination

a. *Internal.* Coordination at each level of command establishes the pertinent details which must be developed through planning to insure integrated action by the total force employed. The tactical air commander will insure coordinated action by assigned tactical air forces. The theater air commander will insure coordination of the tactical air command plans. Failure to coordinate attacks will permit the enemy to reroute his traffic quickly and to utilize his logistical structure to the maximum. Likewise, it will enable him to shift his defensive forces to oppose the attacking forces more effectively.

b. *External:*

(1) Air force commanders are responsible for coordinating their plans with forces, other than air forces, that engage in supporting

actions or that are directly interested in the effects to be produced. This is accomplished through liaison. This coordination begins in the initial planning phase and continues throughout the operation.

(2) Through the coordination of plans, the offensive actions of all theater forces are timed to impose the highest rate of attrition of prestocked materiel at the time that maximum strain is imposed on the enemy's logistical system. This requirement for coordination is implicit in the theater directive setting forth the scheme of employment for theater air operations.

(3) Operations in which air attacks are delivered against sea lines of communication require close coordination with naval forces. The location and identification of the enemy's shipping is best achieved through the combined efforts of air and naval forces. The mining of sea and port areas, and in some cases inland waterways, is accomplished by both air and naval forces. Naval firepower can be placed on interdiction targets in coastal and port areas.

(4) Covert and special operations by friendly surface forces significantly assist the interdiction campaign. These operations are carried out to destroy key bridges, important communications facilities, and targets of particular importance that are subject to destruction or neutralization by small and specialized surface forces. Those preplanned actions are coordinated with the overall interdiction program.

17. Concentration of Effort

The concentration of effort to create the greatest possible dislocation of the enemy's logistical system is of prime importance. Piecemeal application of effort will permit the enemy to take maximum advantage of his ability to reroute, improvise, and repair. Concerted attacks swamp repair facilities and deplete stocks of materiel. The same air effort spread over a long period will produce less effective results. Moreover, effort applied in accordance with the principle of mass places a far greater burden on the enemy's defenses. The segmented application of forces subjects them to defeat in detail, with the result that increased attrition is suffered.

Chapter 4

CLOSE AIR SUPPORT OPERATIONS

Section A. THE CONCEPT

1. Exploitation

a. When counter air operations have neutralized the enemy threat from the air, and air interdiction operations have weakened the enemy situation on the surface, the conditions which then result in a theater generally are the most favorable for exploitation by friendly surface forces in offensive action. When theater air forces conduct close air support operations they usually conduct them under such conditions.

b. Close air support operations are most effective when the surface forces concerned are on the offensive.

2. Coordinated Action

The concept for close air support operations differs basically from counter air and interdiction operations in that, in close support operations, detailed coordination is required with the fire and movement of the surface forces. This coordination begins in the planning for close air support and continues until the operations are concluded. Accordingly, in operations of this type the efforts of the air and surface forces involved are coordinated at parallel levels of command. This coordination is in the interest of the greatest possible exploitation of situations resulting from any specific actions. Although actions are coordinated, each component operates under its own command structure and each component supports the other.

3. Central Control

a. In close support operations, no special organization is required. Normally, the theater

air commander delegates control to air commanders at lower echelons of command. Thus, the air operations are centrally controlled down through theater air channels to the tactical air commander concerned.

b. Air effort in close air support operations always must be expended with the proper perspective in relation to other theater air tasks and the overall theater mission. Centralized control insures that this is done. It provides the continuity necessary in the most effective operations.

4. Adjacent Headquarters

a. Air and ground commanders coordinate and integrate close air support operations to the greatest practicable degree.

b. Air force and ground force headquarters are located adjacent to each other. Successful coordination requires mutual understanding and a constant interchange of views.

5. Air Components

a. In close air support operations, the theater air force headquarters works in conjunction with its counterpart, the theater ground force headquarters; the tactical air commands function in coordination with army groups; and tactical air forces work in concert with field armies. The tactical bomber forces have no ground force counterpart. They are used in furtherance of the commitment of the tactical air commands. Because no close relationship with surface forces is required for the accomplishment of the major portion of the bomber force missions, the employment of these units

in close air support operations with a tactical air force is based on the requirements for the force as planned by the tactical air command. During these operations, control of the tactical

bomber force is exercised through the control and directing facilities of the tactical air force commander in whose area the mission is conducted.

Section B. OBJECTIVES

6. Effectiveness

a. Air operations in the immediate battle area are most effective when air units are employed to perform the following specific functions:

(1) Participate in a coordinated action with ground forces to achieve a breakthrough.

(2) Participate in the conduct of exploitation operations.

(3) Participate in a coordinated action with ground forces to prevent a major enemy offensive or counteroffensive.

(4) Conduct attacks against selected targets which are beyond the capability of attack by organic weapons of the ground forces, and which pose an unacceptable threat to the security of the ground forces.

(5) Participate in a coordinated action with the ground forces in the conduct of airborne operations.

(6) Participate in conjunction with the surface forces in the conduct of amphibious operations.

b. In general, these theater operations are characterized by extremely fluid situations wherein forces are on the move and exposed to the concentrated demoralizing action of the theater air forces. As a converse to this, with the exception of air attacks against specific and isolated targets, a lesser amount of air effort is required for close air support operations when the ground situation is in a static condition. During such times the most remunerative results are achieved by the counter air and interdiction campaigns.

7. Breakthrough Operations

a. A breakthrough when the enemy position has become softened and untenable is one of the most appropriate situations for the employment of air effort in conjunction with ground force action. In a situation such as this, the

enemy forces have the choice of being overrun in place or abandoning their position and being subjected to constant air attack.

b. A breakthrough usually is initiated by application of both air and ground forces against specific sections of enemy-held positions. Greater concentrations of firepower result from the simultaneous use of air and artillery effort. Concurrent use of both air and ground weapons, when properly coordinated, increases the weight of munitions fired at the enemy and decreases the loss of friendly aircraft by the suppressing effect of friendly fire on enemy positions. Through the use of weapons of mass destruction and concentrated conventional weapons attack, air effort is able to provide the force necessary for the breaching of hostile positions. This will cause such confusion and demoralization of the enemy forces that exploitation of the situation by friendly ground forces will be greatly facilitated. Once the breakthrough is under way, air effort attacks targets such as strong defensive positions, concentrations of enemy troops, and other centers of resistance which may delay the completion of the breakthrough by the ground forces.

c. Air effort assigned to the operation must be concentrated in sufficient strength upon those targets which will produce the desired results. Until friendly ground forces are in command of the situation, air action continues so that the enemy forces are prohibited from regrouping and initiating a counteroffensive.

d. Due to the fluid situation, enemy threats may occur in a number of different localities. In addition, enemy air activity may present a threat to the success of the operation. For these reasons, emphasis must be placed upon the need for centralized control. A high degree of control throughout the entire theater control and direction system is necessary so that air effort may be shifted to counter any adverse situation which may arise.

8. Exploitation Operations

Ground force tactics in the exploitation operations usually consist of the rapid advance of armored columns. Air effort is employed with minimum delay against enemy resistance capable of slowing the advance of these columns. During these operations a forward air controller accompanies advancing columns to facilitate and direct air strikes. He is the representative of the tactical air force commander.

9. Hostile Offensive or Counteroffensive Operations

a. A hostile offensive or counteroffensive is action initiated by the enemy in attempting to gain or regain territory from friendly ground forces. It may be attempted with or without control of the air being held by the hostile forces. In those cases where the enemy does have control of the air, friendly air effort must be allotted appropriately to counter air operations. Under conditions of friendly air control, and when priorities in relation to the overall air task are sufficient, air effort may be employed against both interdiction and close air support targets.

b. The massing of advancing forces forms excellent targets for the use of air weapons of mass destruction and saturation bombings of specific areas where hostile forces are concentrated. The requirement for air operations in a fluid situation of this type, and on targets which are in extreme proximity to friendly forces, re-emphasizes the need for close coordination and maximum effective operation of the control and directing system.

10. Attacks Against Selected Targets

Ground forces are provided with the required organic weapons normally considered necessary for the conduct of the surface campaign. These weapons should be used for the neutralization and destruction of the majority of targets.

Section C. EFFECTS

13. Targets and Effects

a. The types of targets associated most often with close air support operations fall into three general categories:

However, at various times there will be certain selected targets of such a nature that they can be more effectively and economically neutralized by air attack than by surface action. During a static situation these targets appear less frequently. In a rapidly moving situation in which organic weapons of the ground forces are unable to keep up with the advance elements these targets will become more frequent. The use of air effort is applied as required.

11. Airborne Operations

a. Airborne operations are conducted independently or in conjunction with other surface action to seize and hold vital areas and important objectives. This type of operation usually is directed behind the hostile front lines and is dependent upon air operations in order to maintain and exploit the position until a final link-up with surface forces.

b. Close air support operations will provide screening aids, such as smoke, for the protection of landing troops and air attacks upon those targets at or near the drop zone—landing zone (DZ-LZ). Control facilities usually are over-extended and necessitates assignment of air force forward air controllers to perform the actual jump or landing with the airborne elements. The use of air alert for the performance of missions in the area may be justified since a warning system and an air request net may not exist and attacks on targets will be required almost immediately.

c. Airborne operations require a high degree of control of the air.

12. Amphibious Operations

In amphibious landings, close air support operations do not differ from those performed in a land mass campaign. However, they are of paramount importance to landing forces because troops are in exposed positions and organic artillery is not available during initial phases. (See AFM 1-5.)

(1) Concentrations of troops.

(2) Vehicles and materiel.

(3) Emplacements and fortified positions.

b. Targets in close air support operations

generally are less remunerative targets for destruction by air attack than targets in enemy territory beyond the immediate surface battle area. Targets based on surface force requests, therefore, must be evaluated accurately in order for the air effort to be employed most effectively in close air support operations. This evaluation should consider the ultimate and immediate effects of the attack in question, physical characteristics of the target, weapons and aircraft available, and the operational factors (such as identifiability of the target, weather, enemy opposition) involved.

14. Typical Targets

a. *Concentration of Troops.* This category includes personnel as the principal target. The criterion for consideration of troops as a lucrative target is whether the individual components are concentrated and present in numbers sufficient to justify destruction by air attack. Normally, the secondary objective, when attacking personnel, is to achieve a neutralizing and psychological effect in order to establish

Section D. CONTROL AND DIRECTION

15. General

a. Close air support operations can be conducted more effectively when major air and ground forces headquarters are located in close proximity to each other, when a joint operations center (JOC) is established for expediting daily operational requirements, and when the air commander has an efficient tactical air control system with which to apply the air effort when and where it is required.

b. The employment of theater air forces in these operations requires detailed coordination with the combat action of the surface forces. Major air and ground force headquarters must be located close together to facilitate coordination, planning, and daily operational activities.

c. The joint operations center provides an agency for the constant interchange of air and surface battle information and the means by which rapid coordinated action can be taken to conduct close air support operations. Day-to-day requirements for air action as requested by the surface forces are processed through this agency.

a situation which can be exploited by friendly surface forces. Area bombing, as well as strafing attacks, may be used against these targets. Under certain conditions—and depending upon their availability—weapons of mass destruction may be employed against large bodies of troops.

b. *Vehicles and Materiel.* These, when in the battle area, normally will be dispersed to the degree that they become precise pin-point targets. Destruction by air attack will require proportionately greater effort.

c. *Emplacements and Fortified Positions.* Such targets include gun positions in open emplacements, revetments, or in strong reinforced positions such as pillboxes, and so forth. Air attacks can be made to reduce firepower by damage to the weapons or to destroy the equipment and crews. Destruction of strongly fortified pillboxes is extremely difficult because it requires pin-point precision. The objective in attacking this type of target must be carefully evaluated. Whenever possible, surface artillery should be used because of greater operational economy.

d. The execution and implementation of the air commander's decisions are effected through the tactical air control system established within each tactical air force. This system enables the air commander effectively to control the application of the air effort.

16. Joint Operations Center (JOC)

The joint operations center is an air operations center and is an air force facility established at the tactical air force-field army level to facilitate planning, to exchange air and surface battle information, and actively to engage in the detailed coordination of air and surface operations. It is the activity where the surface forces can make known their requirements for air strikes and where these requirements can be evaluated in relationship to the overall air effort being expended to accomplish other air tasks assigned to the tactical air force. The JOC is actually the combat operations room of the tactical air force and contains surface force representatives for requesting and coordinating purposes. Normally, the JOC consists of two

sections; the combat operations section and the air-ground operations section:

a. *Combat Operations Section.* This is the activity through which the tactical air force commander assigns, supervises, and coordinates the air effort in the performance of those tasks delegated by the tactical air command. This section is an integral part of the tactical air force headquarters and is staffed with personnel from the tactical air force headquarters to include an operations section, an intelligence section, and such other personnel required to perform the necessary operations. The senior operations officer is the combat operations officer. He is the officer responsible for this section and simultaneously is the officer in charge of the joint operations center.

b. *Air-Ground Operations Section.* This section represents the ground force in the joint operations center. It is the activity through which requests for air strikes are submitted by the various ground force units. These requests are evaluated and approved or disapproved, from the ground force viewpoint, by ground force representatives. If approved, they are submitted to the combat operations section for approval or disapproval. This activity works as a liaison and coordinating activity to present ground requirements for air effort, and consists of a limited number of highly qualified ground officers specially trained for such duties. An efficient air-ground operations system with capable personnel performing analysis and evaluation of ground force requests for air strikes at the lower levels of ground force command will alleviate unnecessary workload and numerous disapprovals of requests within the air-ground operations section of the joint operations center.

c. *Naval Representation.* An appropriate naval representative may be assigned as required to assist the air combat operations officer in integrating naval matters of concern to the tactical air force commander.

17. Air-Ground Operations System (Army)

a. The air-ground operations system is a ground force responsibility. It is organized,

manned, and equipped by the ground forces to provide for the rapid exchange of battle information, to process ground force requests for air missions and, in general, to provide the means through which coordination can be achieved in air-ground operations. This system enables the liaison and planning personnel to represent the ground forces at the various appropriate echelons of both air and ground commands.

b. The focal point of this system is the air-ground operations section representing the army in the joint operations center. The air-ground operations section processes air requests; maintains current battle information on the location of forward friendly surface elements, the bomb line, information and intelligence about the enemy forces obtained from all sources, capabilities of friendly and enemy forces; and participates in the planning of requirements for projected operations.

18. Communications

a. In air-ground operations, rapid and dependable communications must be available between all of the principal echelons of the air and surface forces. In these operations a requirement exists for two separate and distinct communications facilities, each being a responsibility of the force which has primary interest in that facility.

b. In the conduct of these operations the air forces utilize the basic control and communications system which already is established for the performance of other theater air tasks.

c. Ground forces have the responsibility within the air-ground operations system for establishing and maintaining the required communications system to process requests for air action. Requests and information must flow from the lowest requesting ground force activity to the joint operations center through a closely integrated communications network. This system must be devoid of any delays through the intermediate echelons so that no resultant delay will occur in the accomplishment of the desired air mission.

Section E. PLANNING FACTORS

19. General

Based on the theater air plan and planning directives issued by higher headquarters, the detailed planning for the coordinated air and ground effort is conducted at the tactical air force-field army level. As a part of the planning cycle these detailed plans are subject to change in consonance with the planning performed by higher headquarters in furtherance of the overall mission.

20. Planning the Air Mission

Air mission planning is continuous and is conducted by the appropriate staff sections in the tactical air force headquarters. This mis-

sion planning is coordinated with surface force staff officers when air missions are to be conducted in the immediate surface combat area. This planning results in a daily air plan, which is presented at a briefing for approval by the air commander. The decision for the assignment of air effort to the various air tasks is the responsibility of the air force commander. He must consider the estimated long term gains to the forces as a whole as opposed to the immediate local success gained by a portion of that force. His decisions to fulfill specific ground force requests are based on the importance of the target, suitability for air attack, identification, and safety of friendly ground forces.

The American Medical Association is a national organization of physicians and surgeons. It was founded in 1846 and has since that time been the leading organization of the medical profession in the United States. The Association's primary purpose is to advance the interests of the medical profession and the public. It does this through a variety of means, including the publication of the Journal of the American Medical Association, the holding of annual meetings, and the advocacy of legislation and public policy. The Association also provides a wide range of services to its members, including continuing medical education, malpractice insurance, and a variety of other benefits. The Association is a non-profit organization and is governed by a board of trustees. It is a member of the United Nations and the World Health Organization. The Association's headquarters are located in Chicago, Illinois. It has a long and distinguished history and is a respected and influential organization in the medical community.

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